

REMARKS/ARGUMENTS

The Office Action dated January 18, 2006 has been reviewed and carefully considered. Claims 20-67 and 76-89 are pending in this application, with claims 20, 57, 78, and 83 being the only independent claims. Claims 20, 57, 78, 83 and 88 have been amended. Reconsideration of the above-identified application, in view of the above amendments and the following remarks, is respectfully requested.

Rejections Under 35 U.S.C. §112

Claims 20-67, 76, 77 and 86-89 stand rejected under 35 U.S.C. 112, first paragraph, because of the expression "the jets being formed solely by the openings" in claim 20 and the expression "jets...are formed solely by said openings" in claim 57.

Independent claim 20 has been amended to replace the expression "the jets being formed solely by the openings in the at least one nozzle plate" with "the openings in which the jets are formed being defined solely by the at least one nozzle plate". Support for this amendment can be found in Fig. 1 and on page 5, line 36-37 of the specification.

Independent claim 57 has also been appropriately amended to recite that "said openings in which the jets are formed are defined solely by said at least one nozzle plate".

Although the exact language is not found in the specification, Fig. 1 clearly shows that the openings 10 are defined solely by the nozzle plate 6 and page 5, lines 36-37 of the specification clearly discloses that the jets are formed in the openings 10. Drawings are part of the original disclosure. See MPEP 608. Therefore, the amended expression is supported by the specification.

In view of these amendments and remarks, withdrawal of the rejection under 35 U.S.C. 112, first paragraph, of claims 20-67, 76, 77 and 86-89 is respectfully requested.

Claims 88 and 89 stand rejected under 35 U.S.C. 112, second paragraph, because claim 88 (a device claim) depends from claim 28 (a method claim). Claim 88 has been amended to depend from claim 58. In view this amendment, the rejection under 35 U.S.C. 112, second paragraph, of claims 88 and 89 should be withdrawn.

Rejection of Claims Under 35 U.S.C. §§102 and 103

Claims 78, 82 and 85 stand rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 4,901,093 (Ruggiero).

Claim 83 stands rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 5,649,867 (Briggs).

Claims 79 and 84 stand rejected under 35 U.S.C. 103(a) as unpatentable over Ruggiero in view of U.S. Patent No. 5,790,147 (Hensel).

Claims 80 and 85 stand rejected under 35 U.S.C. 103(a) as unpatentable over Ruggiero in view of U.S. Patent No. 5,405,087 (Waryu).

Claim 81 stands rejected under 35 U.S.C. 103 as unpatentable over Ruggiero in view of Waryu and further in view of WO96/10463 (Kunze-Concewitz).

Independent claim 78 has been amended to recite "moving the at least one nozzle plate relative to the at least one feeding chamber in a direction transverse to the direction of movement of the moving surface, so that at least a portion of the length of the at least one nozzle plate is moved outside of a width of an area of the moving surface to be treated". Support for such amendment can be found, for example, in Figs 1 and 2 and the paragraph that bridges pages 8 and 9 of the specification.

Applicant respectfully submits that Ruggiero fails to disclose, either expressly or inherently, the above recitations of independent claim 78.

Ruggiero relates to an ink jet device (see abstract of Ruggiero). The ink jet device (20, 100) includes a reservoir (22, 104), and an imaging head (24, 102) having an orifice plate (118, 132) with a plurality of orifices (34, 106, 130) (see Figs. 1, 2 and 8, 9 and 11; col. 3, lines 18-31, col. 5, lines 32-36, col. 6, lines 1-7 of Ruggiero). In Ruggiero, the imaging head (24, 102) is fixedly attached to the reservoir (22, 104) (see Figs. 1-3 and 8 of Ruggiero). And the orifice plate (118, 132) of the imaging head (24, 102) is in a fixed position relative to the reservoir (22, 104) or any of the ink chambers (36, 28, 114, 134) (see Figs. 1-3 and 8, 9 and 11; col. 3, lines 32-44, col. 5, lines 46-58, col. 6, lines 1-7 of Ruggiero).

Since the orifice plate (118, 132) of Ruggiero cannot be moved relative to the reservoir (22, 104) or any of the ink chambers (36, 28, 114, 134), Ruggiero fails to disclose, teach or suggest "moving the at least one nozzle plate relative to the at least one feeding chamber in a direction transverse to the direction of movement of the moving surface, so that at least a portion of the length of the at least one nozzle plate is moved outside of a width of an area of the moving surface to be treated", as now expressly recited in independent claim 78.

Independent claim 78 further recites "forming continuous jets". It is noted that in Ruggiero a droplet of ink is ejected from each orifice (see col. 1, lines 17-21 of Ruggiero). Thus, Ruggiero fails to disclose, teach or suggest this limitation.

In view of the foregoing, withdrawal of the §102(b) rejection of claim 78 is respectfully requested.

Claim 83

Independent claim 83 has been amended to recite “continuous jets of the treating agent are formed by said openings” and “an actuator operatively connected to said at least one nozzle plate for moving said at least one nozzle plate relative to said at least one feeding chamber so that said at least one nozzle plate is at least partly outside the width of the area of the moving surface that is to be treated”.

Applicant respectfully submits that Briggs fails to disclose, either expressly or inherently, the above recitations of independent claim 83.

The Examiner refers to col. 7, lines 40-47 of Briggs, and contends that Briggs discloses actuators connected to the nozzle plate to allow for movement. The Examiner's interpretation, however, is incorrect for the following reasons.

First of all, col. 7, lines 40-47 of Briggs merely discloses that the shower head 103 can be adjustable relative to a user because of a swivel ball 153. The front plate with a plurality of openings 151 is definitely fixed to the shower head 103 (see Figs. 1 and 2, col. 7, lines 40-48 of Briggs). And there is no actuator for moving the front plate relative to the rest of the shower head 103. As such, Briggs fails to disclose, teach or suggest “an actuator operatively connected to said at least one nozzle plate for moving said at least one nozzle plate relative to said at least one feeding chamber so that said at least one nozzle plate is at least partly outside the width of the area of the moving surface that is to be treated”, as now expressly recited in independent claim 83.

Second, Figs. 1 and 2 and col. 7, lines 40-48 of Briggs explicitly discloses that the shower head 103 generates “a shower spray or sprinkle”. Since a shower spray or sprinkle does

not constitute a continuous jet, Briggs fails to disclose, teach or suggest "continuous jets of the treating agent are formed by said openings", as expressly recited in independent claim 83.

In view of the foregoing, withdrawal of the §102(b) rejection of claim 83 is respectfully requested.

Dependent Claims 21-56, 58-67, 76-77, 79-82, 84-89

Dependent claims 21-56, 58-67, 76-77, 79-82 and 84-89, each being dependent on one of independent claims 20, 57, 78 and 83, are deemed allowable for at least the same reasons as are independent claims 20, 57, 78 and 83, as well as for the additional limitations recited therein.

In particular, with respect to claim 58, the prior art of record fails to disclose, teach or suggest the recited limitation "a screen plate fitted in said at least one feeding chamber". In the Office Action dated December 23, 2005, the Examiner refers to col. 1, lines 64-67, col. 4, lines 5-19 and Figs. 1 and 5 of Himes, and contends that Himes disclose a screen plate. col. 1, lines 64-67, col. 4, lines 5-19 and Figs. 1 and 5 of Himes mentions a manifold transition plate 37 having a plurality of transition holes 38. The manifold transition plate 37 of Himes, however, does not qualify as a screen plate because it is not used to screen the fluid.

In the Office Action dated June 24, 2005, the Examiner contends that Franz discloses a screen plate through which "the treatment agent is fed into a feeding chamber". The Examiner, however, does not point out exactly which component of Franz constitutes this screen plate. In any event, the Examiner says the screen plate of Franz is disposed upstream of the feeding chamber. Therefore, Franz fails to disclose, teach or suggest "a screen plate fitted in said at least one feeding chamber", as expressly recited in claim 58.

Furthermore, claims 86 and 88 recite that the holes in the screen plate are smaller than the openings in the nozzle plate. Claims 87 and 89 recite that the treating agent is fed from a feed channel through a first boring to the feed chamber, through the screen plate and a second boring and then to the nozzle plate, wherein a pressure drop occurs at each of the first boring, the screen plate, and the second boring. It is respectfully submitted that the prior art of record fails to teach or suggest these limitations.

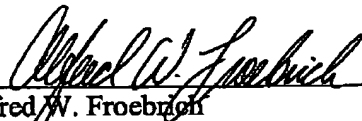
Conclusion

In view of the foregoing, the application is now deemed to be in condition for allowance and notice to that effect is respectfully solicited.

Respectfully submitted,

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